Name: _____ Class: _____ Date: _____ ID: A

Unit 4 Exam

Multiple Choice (Each correct response is worth 2 points) Exam is worth 112 points.
Identify the choice that best completes the statement or answers the question.

D 1. The sense of smell is known as
   a. subliminal stimulation.
   b. the vestibular sense.
   c. transduction.
   d. olfaction.
   e. the gustatory sense.

A 2. Light-wave amplitude determines the
   a. intensity of colors.
   b. color hue we experience.
   c. firing of rods in the retina.
   d. curvature and thickness of the lens.
   e. parallel processing of a scene.

B 3. The feature detectors identified by Hubel and Weisel respond to specific aspects of _____ stimulation.
   a. vestibular
   b. visual
   c. auditory
   d. olfactory
   e. kinesthetic

C 4. If you burn your finger, _____ transmit pain-triggering signals to your central nervous system.
   a. ganglion cells
   b. vestibular sacs
   c. nociceptors
   d. hair cells
   e. feature detectors

D 5. The adjustable opening in the center of the eye is the
   a. fovea.
   b. iris.
   c. cornea.
   d. pupil.
   e. blind spot.

A 6. According to the Young-Helmholtz theory
   a. the retina contains three kinds of color receptors.
   b. color vision depends on pairs of opposing retinal processes.
   c. the size of the difference threshold is proportional to the intensity of the stimulus.
   d. certain nerve cells in the brain respond to specific features of a stimulus.
   e. the optic nerve processes top-down stimuli.

B 7. Brightness is to light as _____ is to sound.
   a. pitch
   b. loudness
   c. frequency
   d. amplitude
   e. wavelength

D 8. Compared with rods, cones are
   a. more sensitive to dim light and more sensitive to fine detail.
   b. less sensitive to dim light and less sensitive to fine detail.
   c. more sensitive to dim light and less sensitive to fine detail.
   d. less sensitive to dim light and more sensitive to fine detail.
   e. more sensitive to any light and less sensitive to fine detail.

D 9. A perceptual set is a
   a. tendency to fill in gaps to perceive a complete, whole object.
   b. readiness to perceive an object in an unfairly negative fashion.
   c. tendency to view objects higher in our field of vision as closer.
   d. mental predisposition that influences what we perceive.
   e. conditioned response to a perceived event.

D 10. The Ames illusion involving two girls who are perceived as very different in size can best be explained in terms of
   a. shape constancy.
   b. retinal disparity.
   c. the principle of continuity.
   d. the misperception of distance.
   e. the visual cliff.

C 11. Which theory best explains how we perceive low-pitched sounds?
   a. place theory
   b. opponent-process theory
   c. frequency theory
   d. the Young-Helmholtz theory
   e. gate-control theory

A 12. The cochlea is a
a. fluid-filled tube in which sound waves trigger nerve impulses.
b. fluid-filled tube that provides a sense of upright body position.
c. fluid-filled tube that provides a sense of body movement.
d. set of three tiny bones that amplify the vibrations of the eardrum.
e. specific area of the auditory cortex.

D 13. Why is transduction important to sensation?
a. It explains our diminishing sensitivity to an unchanging stimulus.
b. It illustrates how much of information processing occurs automatically.
c. It demonstrates how our experiences and expectations affect whether we perceive a stimuli.
d. It converts physical stimuli, such as light, into neural messages.
e. It causes the lens to focus light waves on the retina by changing its curvature.

A 14. Damage to the temporal lobe area of the brain essential for facial recognition produces a loss of
a. perception.
b. signal detection.
c. transduction.
d. accommodation.
e. sensation.

D 15. Depth perception that uses information transmitted to only one eye depends on
a. relative luminance.
b. stroboscopic movement.
c. lightness constancy.
d. monocular cues.
e. perceptual adaptation.

A 16. Which theory emphasizes that personal expectations and motivations influence the level of absolute thresholds?
a. signal detection theory
b. frequency theory
c. opponent-process theory
d. place theory
e. bottom-up theory

C 17. Which theory suggests that large-fiber activity in the spinal cord can prevent pain signals from reaching the brain?
a. signal detection theory
b. opponent-process theory
c. gate-control theory
d. frequency theory
e. parallel processing

D 18. Which of the following play the biggest role in our feeling dizzy and unbalanced after a thrilling roller coaster ride?
a. olfactory receptors
b. feature detectors
c. basilar membranes
d. semicircular canals
e. eardrum

D 19. Damage to the hammer, anvil, and stirrup is most likely to cause
a. prosopagnosia.
b. sensorineural hearing loss.
c. phantom limb sensations.
d. conduction hearing loss.
e. synaesthesia.

E 20. The ability to simultaneously process the pitch, loudness, melody, and meaning of a song best illustrates
a. subliminal perception.
b. kinesthesis.
c. accommodation.
d. sensory adaptation.
e. parallel processing.

D 21. The organization of two-dimensional retinal images into three-dimensional perceptions is called
a. retinal disparity.
b. monocular cues.
c. perceptual constancy.
d. depth perception.
e. sensory interaction.

D 22. The effect of prior experience and current expectations on perception best illustrates the importance of
a. accommodation.
b. transduction.
c. sensory thresholds.
d. top-down processing.
e. sensation.

D 23. The most light-sensitive receptor cells are the
a. ganglion cells.
b. cones.
c. bipolar cells.
d. rods.
e. iris.

C 24. Which of the following is the correct order of structures light passes through in the eye?
a. lens, cornea, pupil, retina, iris
b. retina, lens, cornea, rods, cones
c. cornea, iris, pupil, lens, retina
d. pupil, optic nerve, retina, lens, rods
e. pupil, cornea, retina, lens, optic nerve

A 25. The simultaneous stimulation of adjacent cold and warmth spots on the skin produces the sensation of
a. hot.
b. cold.
c. pressure.
d. wetness.
e. pain.

D 26. The McGurk effect best illustrates
a. phantom limb sensations.
b. the rubber-hand illusion.
c. tinnitus.
d. sensory interaction.
e. color constancy.

D 27. To those throwing a very heavy rather than a light object at a target, the target is likely to be perceived as
a. softer.
b. slower moving.
c. larger.
d. farther away.
e. more difficult.

D 28. Taste and smell are both what kind of senses?
a. vestibular
b. kinesthetic
c. energy
d. chemical
e. perceptual

C 29. Damage to the fovea would have the greatest effect on
a. night vision.
b. peripheral vision.
c. visual acuity.
d. sensory adaptation.
e. kinesthesis.

E 30. Giulio's bag of marbles is twice as heavy as Jim's. If it takes 5 extra marbles to make Jim's bag feel heavier, it will take 10 extra marbles to make Giulio's bag feel heavier. This best illustrates
a. the opponent-process theory.
b. accommodation.
c. the McGurk effect.
d. sensory adaptation.
e. Weber's law.

B 31. Tinnitus is a phantom _____ sensation.
a. visual
b. auditory
c. taste
d. touch
e. kinesthetic

A 32. If an adult develops cataracts, his or her
a. absolute threshold for light is likely to increase.
b. difference threshold for light is likely to decrease.
c. absolute threshold for light is likely to decrease.
d. difference threshold for light is likely to remain unchanged.
e. absolute threshold for light is likely to remain the same.

A 33. Psychologists are skeptical about ESP claims because
a. studies claiming to demonstrate such abilities fail at replication.
b. parapsychologists accept fraudulent evidence.
c. such abilities cannot be tested scientifically.
d. researchers have difficulty finding participants for such research.
e. ethical concerns make testing such abilities relatively impossible.

B 34. A subliminal message is one that is presented
a. while an individual is under hypnosis.
b. below one's absolute threshold for awareness.
c. in a manner that is unconsciously persuasive.
d. with very soft background music.
e. repetitiously.

E 35. The detection and encoding of stimulus energies by the nervous system is called
a. signal detection.
b. priming.
c. synaesthesia.
d. accommodation.
e. sensation.

C 36. When Jason briefly turned to summon the waiter, his wife quickly switched her glass of red wine with his glass of white wine. Jason's failure to notice that his chosen wine had been replaced best illustrates
a. place theory.
b. sensory interaction.
c. change blindness.
d. parallel processing.
e. figure-ground.

C 37. Which process allows more light to reach the periphery of the retina?
a. accommodation of the lens
b. transduction of the blind spot
c. dilation of the pupil
d. sensory adaptation of feature detectors
e. focusing light effectively on the fovea

C 38. The quick succession of briefly flashed images in a motion picture produces
a. retinal disparity.
b. the Ponzo illusion.
c. stroboscopic movement.
d. linear perspective.
e. frequency theory.

D 39. Cocking your head would be most useful for detecting the _____ of a sound.
a. intensity
b. pitch
c. loudness
d. location
e. amplitude

C 40. Ohio State University pedestrians were more likely to cross streets unsafely if they were talking on a cell phone. This best illustrates the impact of
a. place theory.
b. gate-control theory.
c. selective attention.
d. the phi phenomenon.
e. retinal disparity.

D 41. Because she was listening to the news on the radio, Mrs. Schultz didn't perceive a word her husband was saying. Her experience best illustrates
a. gate-control theory.
b. choice blindness.
c. gestalt.
d. selective attention.
e. opponent-process theory.

C 42. Hair cells line the surface of the
a. feature detectors.
b. eardrum.
c. basilar membrane.
d. auditory nerve.
e. fovea.

A 43. Phantom limb sensations best illustrate that pain can be experienced in the absence of
a. sensory input.
b. top-down processing.
c. conscious awareness.
d. parallel processing.
e. figure-ground.

D 44. Which basic taste attracts us to protein-rich foods?
a. sweet
b. salty
c. sour
d. umami
e. bitter

D 45. The cocktail party effect is your ability to selectively attend to one voice among many. This ability also illustrates the Gestalt principle of
a. proximity.
b. similarity.
c. connectedness.
d. figure and ground.
e. closure.

C 46. Sensory adaptation helps us to focus our attention on what kind of stimuli?
a. familiar
b. subliminal
c. novel
d. intense
e. transduced

E 47. The principles of continuity and closure best illustrate the importance of
a. binocular cues.
b. perceptual adaptation.
c. Weber's law.
d. perceptual constancy.
e. top-down processing.

B 48. The retina is to the eye as the _____ is to the ear.
a. auditory nerve
b. cochlea
c. auditory canal
d. eardrum
e. eustachian tube

B 49. Although Sue Yen sees her chemistry teacher several times a week, she didn't recognize the teacher when she saw her in the grocery store. This best illustrates the importance of
a. monocular cues.
b. context effects.
c. proximity.
d. linear perspective.
e. perceptual adaptation.

A 50. As we move, objects that are fixed in place (a light pole, for example) may appear to move. What is this monocular cue for depth called?
a. relative motion
b. interposition
c. proximity
d. retinal disparity
e. continuity

A 51. Experiencing a green afterimage of a red object is most easily explained by
a. the opponent-process theory.
b. the gate-control theory.
c. place theory.
d. the Young-Helmholtz theory.
e. frequency theory.

Short Answer: Each short answer question is worth 5 points, answer any two.

1. Use the following terms to explain an example of visual perception: sensation, retina, absolute threshold, transduce, top-down processing, feature detector.

2. Last night one of your mother's best friends was involved in a car accident. Your mother feels guilty because three days ago she dreamed of such an accident but failed to warn her friend. How would you explain your mother's experience? What advice would you give her? Explain what is wrong with your friend's belief.

3. You have been asked to paint a picture that includes buildings, fields, a river, and a mountain. Describe how you would use at least four monocular cues to give your painting a sense of depth.

4. Explain how perceptual sets, perceptual constancy, and stroboscopic movement may all be involved in perceiving a movie.

SHORT ANSWER

1. ANS:
   Students should provide an example of visual perception and explain each term in its context: the light is reflected off the object entering our eye (sensation), passes through our eye and is reflected on the retina, the light energy is strong enough to be perceived (absolute threshold), the light energy is changed into neural impulses (transduce), our brain interprets the neural impulses as a specific visual image based on our past experiences (top-down processing), the neural impulses are interpreted by feature detectors in the visual cortex.

   PTS: 1 REF: Section- Sensation and Perception MSC: Conceptual | Application

2. ANS:
   Students should explain that studies do not support the claim that predictive dreams (or any other "extra sensory perception" phenomena) occur. When tested, dreams do not appear to predict the future any better than random chance would predict. The dream may seem vivid and predictive to the friend's mother because of the coincidence of the car accident, but she should be reminded of all her dreams that did not come true.

   PTS: 1 REF: Section- Sensation and Perception MSC: Conceptual | Application

3. ANS:
   Students can describe the use of any four monocular depth cues: Relative height (painting some objects higher in the field of vision so that they are perceived as farther away), relative size (painting objects smaller so that they are perceived as farther away), interposition (painting one object partially obscuring another to indicate depth), linear perspective (painting parallel lines or paths converging to indicate distance), light and shadow (painting objects with shading to indicate depth).

   PTS: 1 REF: Section- Sensation and Perception MSC: Conceptual | Application

4. ANS:
   Students should provide plausible examples of how the three perceptual principles might contribute to what they see in a movie. Perceptual set involves a mental predisposition to perceive something in the film. Perceptual constancy involves perceiving an object in the movie as unchanging in shape, size, lightness, or color even as the lighting conditions or visual angle changes in the movie. Stroboscopic movement is involved during the movie watching, because it causes the perception of smooth movement from the rapid presentation of individual frames of film (or video).

   PTS: 1 REF: Section- Sensation and Perception MSC: Conceptual | Application